

## WHAT IS CLAIMED IS:

1. A method of splicing digital signals comprising at least two types of data packets: I and P packets of complete data and B packets of differential data, 5 said method comprising the following steps:
  - receiving a first digital signal s1;
  - receiving a second digital signal s2;
  - receiving a splicing command  $Cc(T_0)$ ;
  - transmitting the first signal s1 before the splicing indicated by the 10 splicing command  $Cc(T_0)$ ; and
  - transmitting the second signal s2 after the splicing indicated by the splicing command  $Cc(T_0)$ ,

wherein transmission of the second signal s2 starts with the I or P packets of complete data closest to the instant  $T_0$  indicated by the splicing command 15  $Cc(T_0)$  in such a way that the reproduction of the second signal s2 starts with the reproduction of the I or P packet of complete data.
2. The splicing method according to claim 1, wherein transmission of the first signal s1 ends with transmission of the last I, P or B packet of data received 20 before the start of transmission of the second signal s2 in such a way that the reproduction of the first signal s1 ends with the reproduction of an I or P packet of complete data before the start of reproduction of the second signal s2.
3. The splicing method according to claim 1, wherein transmission of the 25 I or P complete data packets before the B differential data packets is configured in such a way that the reproduction of these I or P packets of complete data is performed after the reproduction of the B packets of differential data.
4. The splicing method according to claim 2, wherein transmission of the 30 I or P complete data packets before the B differential data packets is configured in

such a way that the reproduction of these I or P packets of complete data is performed after the reproduction of the B packets of differential data.

5. The splicing method according to claim 4, wherein transmission of the  
5 first signal s1 ends with transmission of the last B packet of differential data  
received before the start of transmission of the second signal s2 and preceding an I  
or P packet of complete data.

6. The splicing method according to claim 1, wherein the first and second  
10 signals s1 and s2 comprise several types of complete data packets, including at  
least one I packet of introductory complete data and at least one P packet of  
predicted complete data, and several B packets of differential data are assembled  
in a group of packets GOP comprising only one I packet of complete introductory  
data with which the GOP starts, the group of packets enabling the P packets of  
15 predicted complete data and the B packets of differential data to be transmitted in  
an order different from that of the reproduction of the P and B packets.

7. The splicing method according to claim 6, wherein transmission of the  
second signal s2 starts with the I packet of introductory complete data closest to  
20 the instant  $T_0$  indicated by the splicing command  $Cc(T_0)$ .

8. The splicing method according to claim 1, wherein the first signal s1  
and the second signal s2 are video signals.

25 9. The splicing method according to claim 1, wherein the first signal s1  
and the second signal s2 further comprise audio frames.

10. The splicing method according to claim 8, wherein the first signal s1  
and the second signal s2 further comprise audio frames.

11. The splicing method according to claim 10, wherein transmission of the second signal s2 starts with the audio frame configured to be reproduced with a picture constituted by the I packet of introductory complete data with which transmission of the second signal s2 is started.

5

12. The splicing method according to claim 11, wherein transmission of the first signal s1 ends with:

- the last audio frame starting before the instant of the start of transmission of the second signal s2 if the time interval between the start of transmission of the audio frame and the start of transmission of the second signal s2 is greater than or equal to the duration of an audio frame,
- or, if not, the second last audio frame starting before the instant of the start of transmission of the second signal s2.

15

13. The splicing method according to claim 9, comprising:

- during transmission of the first signal s1, transmission of the drift  $\Delta 1$  of the clock h1 of the first signal s1,
- during transmission of the second signal s2, transmission of the drift  $\Delta 2$  of the clock h2 of the second signal s2.

20

14. The splicing method according to claim 12, comprising:

- during transmission of the first signal s1, transmission of the drift  $\Delta 1$  of the clock h1 of the first signal s1,
- during transmission of the second signal s2, transmission of the drift  $\Delta 2$  of the clock h2 of the second signal s2.

15. The splicing method according to claim 1, wherein the digital signals are MPEG-encoded, comprising groups of packets constituted by groups of pictures (GOP), the packets of complete data constituted by the I and P pictures, the packets of differential data constituted by the B pictures, and audio frames.

16. The splicing method according to claim 1, comprising watermarking of the splicing command  $Cc(T_0)$  in the first signal  $s1$ , wherein reception of the splicing command comprises reading the splicing command  $Cc(T_0)$  watermarked in the first signal  $s1^*$ .

5

17. A splicer implementing a splicing method according to claim 1, comprising:

- a first input adapted to receive a first signal  $s1$ ,
- a second input adapted to receive a second signal  $s2$ ,
- 10 - an output adapted to transmit a resulting signal formed by the first signal  $s1$  before the splicing indicated by the splicing command  $Cc(T_0)$  and the second signal  $s2$  after the splicing indicated by the splicing command  $Cc(T_0)$ .

18. A splicer according to claim 17, comprising a watermark reader  
15 connected to the first input.

19. A system for the production and broadcasting of signals, comprising at least one assembly for the production of a first signal  $s1$ , a transmission assembly comprising a splicer according to claim 20, wherein the production  
20 assembly comprises a watermark writing device receiving the first signal  $s1$ , a splicing command  $Cc(T_0)$  and giving a first signal  $s1^*$  watermarked by the splicing command.

20. A digital broadcasting signal comprising a first signal  $s1$  followed by  
25 a second signal  $s2$  starting with a packet of complete data obtained by a splicing method according to claim 1.